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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,672	02/10/2004	Gerrit Klaerner	99-68CON1	1136
22905	7590	09/07/2006	EXAMINER	
SYMYX TECHNOLOGIES INC LEGAL DEPARTMENT 3100 CENTRAL EXPRESS SANTA CLARA, CA 95051			PEZZUTO, HELEN LEE	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,672

Applicant(s)

KLAERNER ET AL.

Examiner

Helen L. Pezzuto

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-23 and 51-61 is/are pending in the application.
- 4a) Of the above claim(s) 53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-23, 51, 52 and 54-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 18-23 and 51-61 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/2/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/2/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the single species of formula (I) as set forth in claim 18 and 51 in the reply filed on 7/13/06 is acknowledged.

2. Claim 53 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/13/06.

Claims 18-23, 51-52, and 54-61 are under consideration in this application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 18 and claims dependent thereon are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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What is the scope and meaning of "said polymer comprises essentially no linking or star center groups"? By the definition of a star polymer, it would be expected to have a "star center group". Please clarify.

5. Claims 57-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The molecular weight for a polymer should be defined by one of the standard types (Mw, Mn, etc).

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do

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not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 18-23, 51-52, and 54-61 are rejected under 35 U.S.C. 102(b) or 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hahn et al. (US-396) or Harlan et al. (US-540) or JP-08-269891 (computer translated document hereby provided) or Fanood et al. (Iranian Polymer Journal (1998), 7(1), 59-65).

US 6,124,396 to Hahn et al. discloses a process of preparing a high molecular weight comb-like branched water-soluble cationic acrylamide copolymer, having a polymer backbone represented by formula I, and a graft polymer

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represented by formula II (col. 3, line 4 to col. 4, line 10). The recited polydispersity index and low critical solubility would be inherent properties in prior art branched polymer product because they contain identical monomeric recurring units, branched architecture and molecular weight as recited in the present claims. The burden is upon the applicant to provide clear evidence that the respective polymer products do in fact differ.

US 6,177,540 to Harlan et al. discloses star-branched polymers derived from using a mercaptan core as a chain transfer agent in the free radical polymerization unsaturated monomer arms. Suitable monomers include various acrylamides within the scope of the present claims (col. 5, lines 19-27), along with other comonomers. T-octyl-acrylamide (tOA) is exemplified as one of the unsaturated monomers in patentees' working examples. The recited molecular weight, polydispersity index and low critical solubility would be inherent properties in prior art branched polymer product because they contain identical monomeric recurring units, branched architecture and molecular weight as recited in the present claims.

JP-08-269891 discloses a high molecular weight and narrow molecular weight distribution branched

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(meth)acrylamide copolymer comprising (meth)acrylamide monomer (A), Allyl group-containing monomer (B), and N-alkyl substituted (meth)acrylamide (C). prior art branched product have weight average molecular weight and viscosity in the claimed range. Similarly, the recited polydispersity index is considered inherent in the prior art because identical branched (meth)acrylamide are formed, absent evidence of their differences.

The article to Fanood et al discloses the preparation of branched polyacrylamide having molecular weight, polydispersity index and viscosity within the scope of the present claims. The recited low critical solubility temperature would be an inherent property in prior art product because identical branched acrylamide polymers are formed, absent evidence of their differences.

Claim Rejections - 35 USC § 103

9. Claims 18-23, 51-52, 54-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazmaier et al. (US-861).

US 5,919,861 discloses a stable free radical agent moderated polymerization process in preparing branched polymers with arms or branches comprised of polymerized monomer with substantially uniform length and narrow polydispersity within the instant range (see abstract; col.

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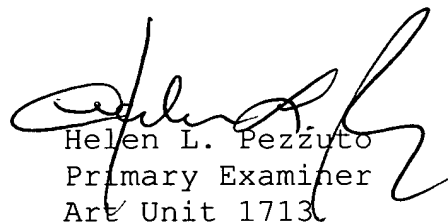
1, line 61 to col. 2, line 9). Suitable free radical monomers include the instant (meth)acrylamide monomers (col. 13, lines 58-60). Accordingly, it would have been obvious to one having ordinary skill in the art to prepare branched polymer under prior art general conditions, using (meth)acrylamide monomers as taught, motivated by the reasonable expectation of success in the formation of branched polymer having narrow polydispersity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Helen L. Pezzuto
Primary Examiner
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hlp